EUROPEAN PATENT APPLICATION

(12)

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(54) **Securities instruments trading system.**

(57) A personal computer system or workstation is arranged to display pertinent trading data in separate windows of a display. A trading window is subdivided into separate windows, for the display of rich securities data, customer data, bond yield data, and cheap securities data. Upon initiation of a trade, buy/sell tickets and transaction confirmation notices are also displayed. Once a rich bond is selected, a list of customers owning the bond is displayed in another window. Also, the bond yield data is calculated over a period of time and plotted in another window. Yield data for the cheap bond is also plotted in the same window as the rich bond yield data. Once a customer decides to make the trade, buy and sell tickets are completed and the trade order sent to the backroom for completion.

EP 0 448 800 A1

This invention relates generally to a system and method for facilitating the trading of securities instruments. In particular, a system and method for displaying information used in making bond trading decisions is disclosed.

In the bond trading industry, a variety of types of information are all factored into a buy/sell decision. Included in the required information are, for example, customer identity, investment objectives, funds available, bond prices, bond performance, bond owners, etc. This information needs to be presented to the trader in such a way that he gets just enough information to make a decision, yet not be burdened by unnecessary information. Furthermore, the information must be presented in a format designed to minimize the time required to make a trade, thereby maximizing revenue.

Traditionally, the gathering of information has been a manual, labor-intensive job, with little organizational structure. The end result is that securities trades are not made in a well-organized manner and many financial opportunities are lost. It is desirable to improve the availability of information to traders so that trades can be made in a timely and efficient manner with the best information available.

OBJECTS OF THE INVENTION

Therefore, it is an object of this invention to provide a system and method for providing information required by a securities trader in an efficient manner.

It is also an objective to provide a system and method for minimizing the time to complete a securities transaction.

It is a further object to provide a system and method for displaying information to a bond trader in an efficient, user-friendly manner.

SUMMARY OF THE INVENTION

These, and other objects of the invention which are readily apparent, are realized by the invention disclosed herein. A personal computer system or workstation is arranged to display pertinent trading data in separate windows of a display. A "trading window" is sub-divided into separate windows, for the display of "rich" securities data, customer data, bond yield data, and "cheap" securities data. Upon initiation of a trade, buy/sell tickets and transaction confirmation notices are also displayed.

In the inventive method, securities feed data is first processed to identify "rich" and "cheap" bonds to sell and buy, respectively. This information is then displayed in separate windows on a computer display. Once a "rich" bond is selected, a list of customers owning the bond is displayed in another window. Also, the bond yield data is calculated over a period of time and plotted in another window.

Next, a customer to trade with is selected and a "cheap" bond is chosen based upon customer investment objectives. Yield data for the "cheap" bond is also plotted in the same window as the "rich" bond yield data. Once a customer decides to make the trade, buy and sell tickets are completed and the trade order sent to the "backroom" for completion.

BRIEF DESCRIPTION OF THE DRAWING

The foregoing and other advantages of the invention will be more fully understood with reference to the description of the preferred embodiment and with reference to the drawing wherein:

FIG. 1 is a flow diagram of the inventive method, and

FIGS. 2A-G are representations of the computer displays that appear on the trading system display during execution of the inventive method.

DESCRIPTION OF THE PREFERRED EMBODIMENT

While the invention will be particulary described with reference to bond trading, it will be readily apparent to those skilled in the art that the invention has applicability to other types of securities, such as stocks, and to commodity trading. Futhermore, though the computer hardware and software implementation will be described with reference to the preferred embodiment, other types of commercially available hardware and software can be subsituted for the commercial components herein described.

The system was initially implemented on an IBM RT Personal Computer (IBM and RT Personal Computer are trademarks of the IBM Corp.) running the AIX (AIX is a trademark of the IBM Corp.) Operating System. It included 19 inch color display, tape drive for storing data and programs, hard disk drive for storing and accessing data and programs, a keyboard and a mouse. For the graphical user interface, the Motif (Motif is a trademark of the Open Software Foundation) toolkit was used and for a database system, the Ingres Database Management System was selected.

Referring to Fig. 1, the first step in the bond trading process is obtaining a list of "rich" and "cheap" bonds to be traded (Block 10). In the securities industry, "rich" bonds are those that overpriced relative to the market, and "cheap" bonds are relatively underpriced. The actual selection of bonds is done by an analytical program which a particular trader might have written using

his own algorithms. Since it is well-known in the art how to make these selections, and each trader has his/her own unique system, and this process is outside the scope of the present invention, step 10 will not be discussed in greater detail. The final result of step 10 is shown in the display illustrated in Fig. 2A. The "rich" bonds are displayed in window 200 and the "cheap" ones in window 210 of "Trade" window 215. The data shown in the "news" window 220 is general financial news that is continuously displayed to keep the trader informed of market activity.

The new data for the bonds is provided by one of several available price collector distribution systems which can be purchased from outside sources or written in-house. An example of the price collector distributor is the FD Consulting MIPS System.

Also in Step 10, the trader selects one of the "rich" bonds to trade. In the example, a bond for company DEF is selected for selling. Three activities are triggered by this selection. Specific data from the feed processor is extracted for this particular bond (Step 20). This data includes brokers' identification, yield rates, pricing information etc. The second process going on is that the system looks at the customer data base and extracts the list of the customers who are holding that particular selected bond (Step 30). At the same time, the system goes to the historical price database and gets the yield data for the past six months (Step 40). The data for these three activities are displayed in windows 230, 240, and 250, respectively (Fig. 2B).

After this information is presented to the trader, the trader selects the customer to make the trade with for that particular selected bond (Step 50). Again, the system looks at the customer database and extracts for the selected customer' Harry Owner is this example, additional detailed information i.e. account executive, investment objectives, financial resources, etc. (Step 60). This information is displayed in window 260 (Fig. 2C).

The system then displays the list of the "cheap" securities in window 270 (Fig. 2C) of the trade window (Step 70). Once this information is presented to the trader, he looks at the investment objective parameters of the customer and looks at the list of the "cheap" bonds, and selects the "cheap" bond which will closely meet the customer's objective parameters (Step 80). He can make this determination based on the information about the customer he has, plus the information presented to him by the system.

Once he selects the "cheap" bond, the system does the processing to select the quotes for prices of the "cheap" bond and extracts information from the price collector distributor interface (Step 90).

This information is displayed in window 270 (Fig. 2D). A bond for JKL Company was selected. Also, yield for the past six months for the "cheap" security is extracted and displayed (Step 100). That yield is displayed on the same graph (Window 250) as the "rich" bond, along with the "spread" between the two bonds.

Having this information about the yields and the prices for "rich" and "cheap" bonds and about the customer and his investment objective parameters are, he talks to the customer and tries to make a trade (Block 110). His job is to convince the customer to sell his "rich" bond and buy the "cheap" bond. If the customer's computer system is connected to the company's system, he can send this information on-line. Otherwise, he can talk directly with the customer, and from that conversation the customer makes a decision (Step 120). If he agrees to that arrangement a trade is made. The system presents the trader with a trade ticket (Window 280, Fig. 2E) containing information about the customer, the bond that is to be sold and the amount of the security. This information is filled in by the system automatically The trader fills in the rest of the information in the trade ticket (Block 140). Once the trade ticket is filled out, he selects the "Next Ticket" button 285 and is presented with another trade ticket for the security to be bought (Window 290, Fig. 2F) As for the prior trade ticket, this new trade ticket is filled out by the system and the trader. Once that is done, the trader presses the "done" button (300, Fig. 2F) and the system presents him with a summary (310, Fig. 2G) confirming the transaction. After he is satisfied with the transaction, he pushes the "done" button 300 another time and the trade is completed.

If the trader did not make the trade, because either the customer did not like the "cheap" bond, had problems in prices, or for any other reasons, he presses the "no trade" button 320 on the "Make a Trade" screen (Fig. 2D). He is then presented with a list of "cheap" securities so that he can select another "cheap" bond that may meet the customer's requirements (Step 130). Alternatively, he can go back to the list of customers and select another customer that he feels will be appropriate.

While the invention has been particularly shown and described with reference to a preferred embodiment thereof, it will be understood by those skilled in the art that various changes in detail may be made therein without departing from the spirit, scope and teaching of the invention. Accordingly, the system and process herein desclosed is to be considered merely as illustrative, and the invention is to be limited only as specified in the claims.

Claims

1. A method for facilitating a securities transaction comprising the following steps:

   providing data about securities to be traded, said data including the owner of the securities and the past yield performance of the securities;

   providing data about customers;

   simultaneously displaying on a computer display data about selected securities, data about selected customers; and

   initiating a securities transaction.

2. A system for facilitating a securities transaction comprising:

   a computer having means for storing data, means for processing data and means for displaying data on a display;

   said data including securities data and customer data;

   said data processing means including means for extracting data about selected securities and selected customers, and for transferring said extracted data to said displaying means;

   said displaying means including means for partitioning a display into windows and means for displaying data about selected securities and selected customers in separate windows;

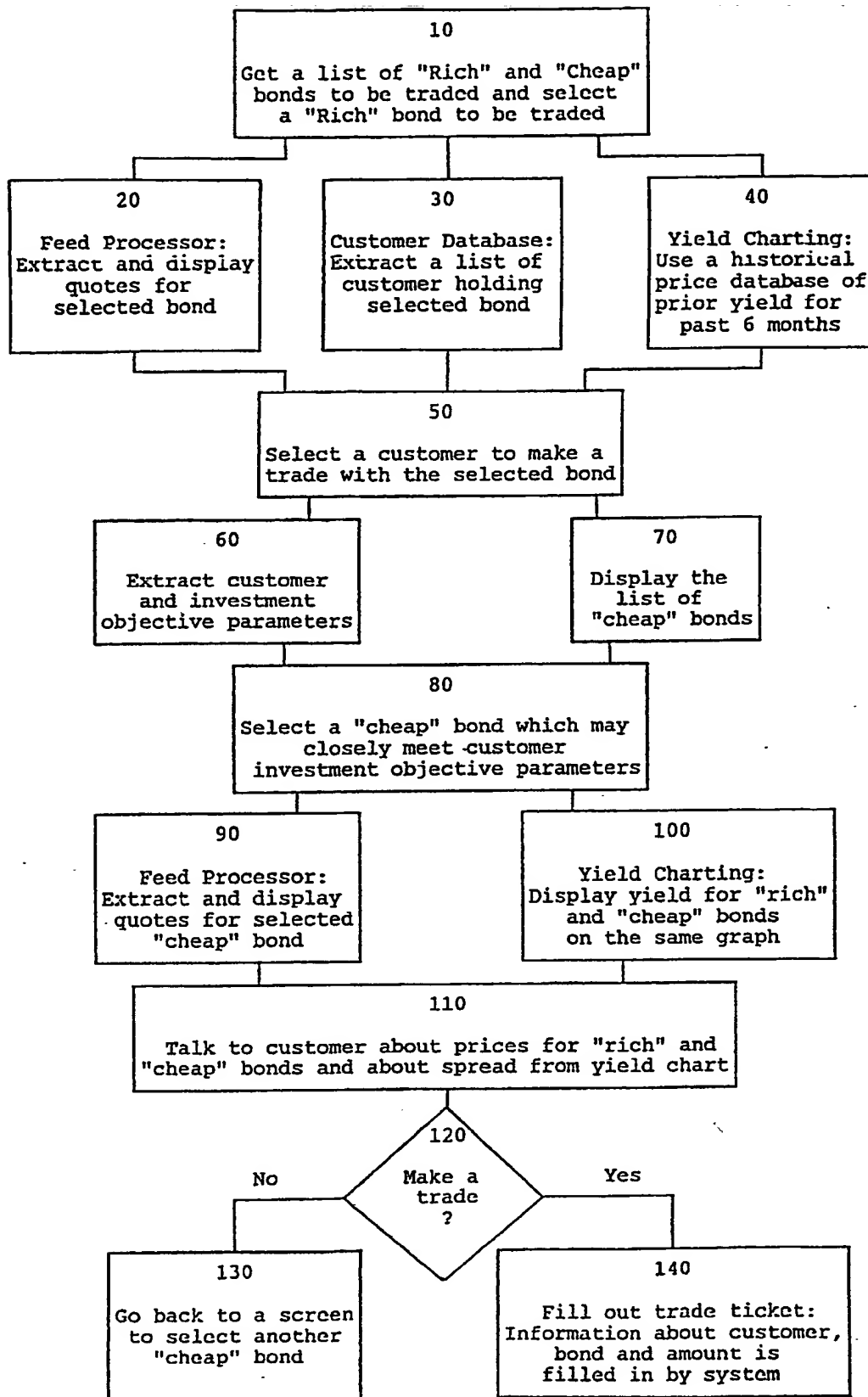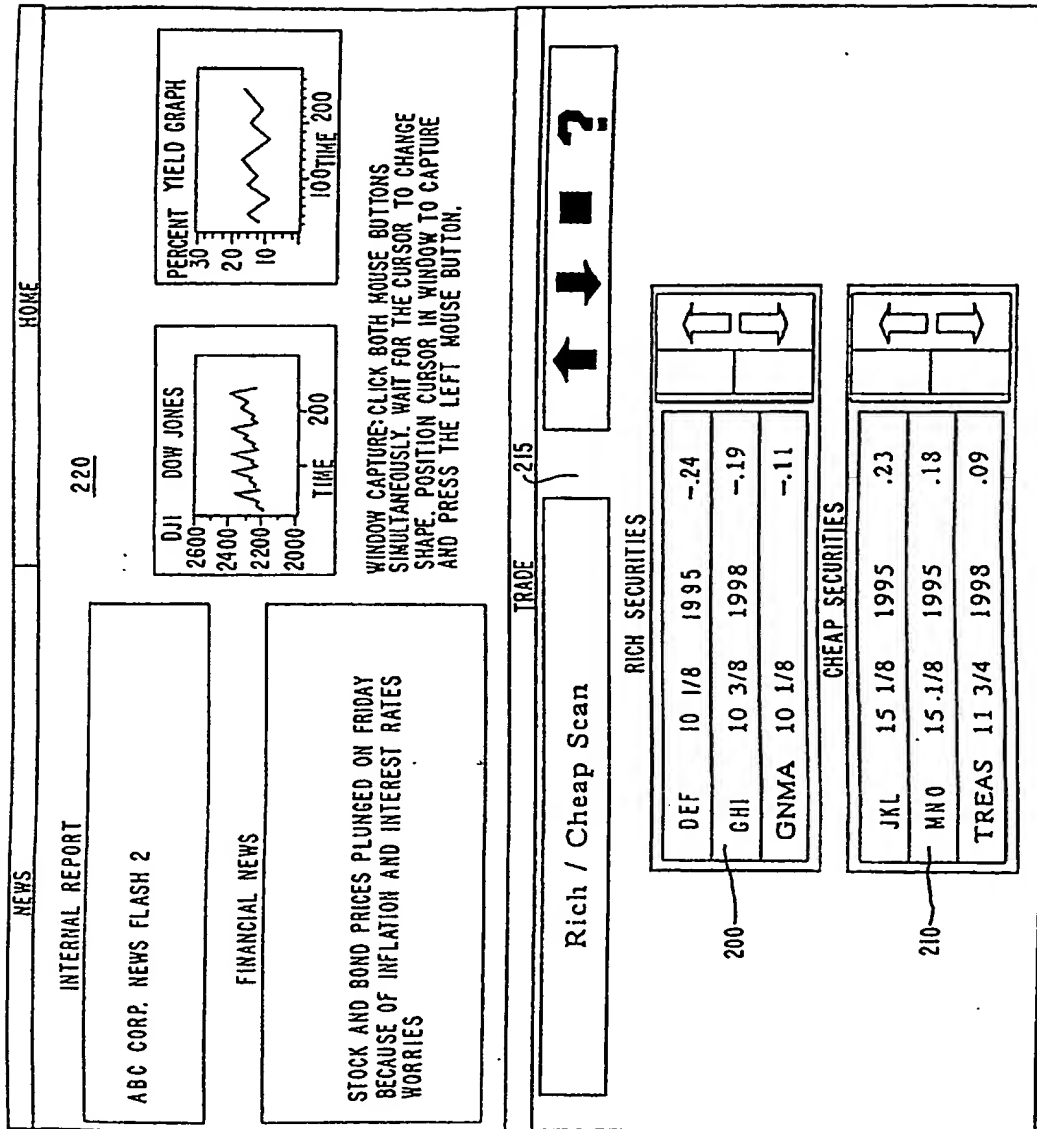   whereby various types of data pertinent to a securities transaction are simultaneously displayed.
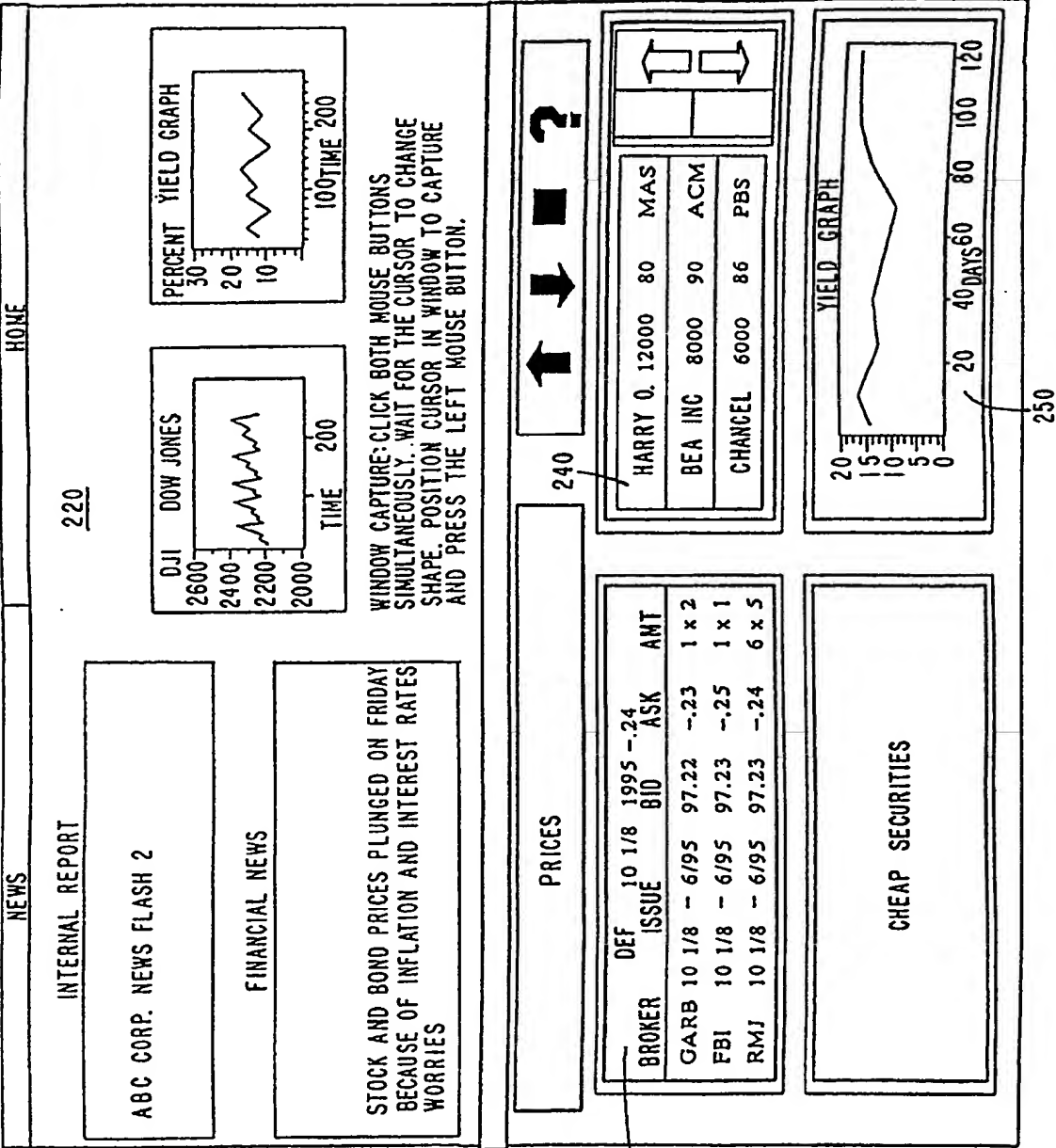
10

Get a list of "Rich" and "Cheap"
bonds to be traded and select
a "Rich" bond to be traded

20

Feed Processor:
Extract and display
quotes for
selected bond

30

Customer Database:
Extract a list of
customer holding
selected bond

40

Yield Charting:
Use a historical
price database of
prior yield for
past 6 months

50

Select a customer to make a
trade with the selected bond

60

Extract customer
and investment
objective parameters

70

Display the
list of
"cheap" bonds

80

Select a "cheap" bond which may
closely meet customer
investment objective parameters

90

Feed Processor:
Extract and display
quotes for selected
"cheap" bond

100

Yield Charting:
Display yield for "rich"
and "cheap" bonds
on the same graph

110

Talk to customer about prices for "rich" and
"cheap" bonds and about spread from yield chart

120

Make a
trade
?

No

Yes

130

Go back to a screen
to select another
"cheap" bond

140

Fill out trade ticket:
Information about customer,
bond and amount is
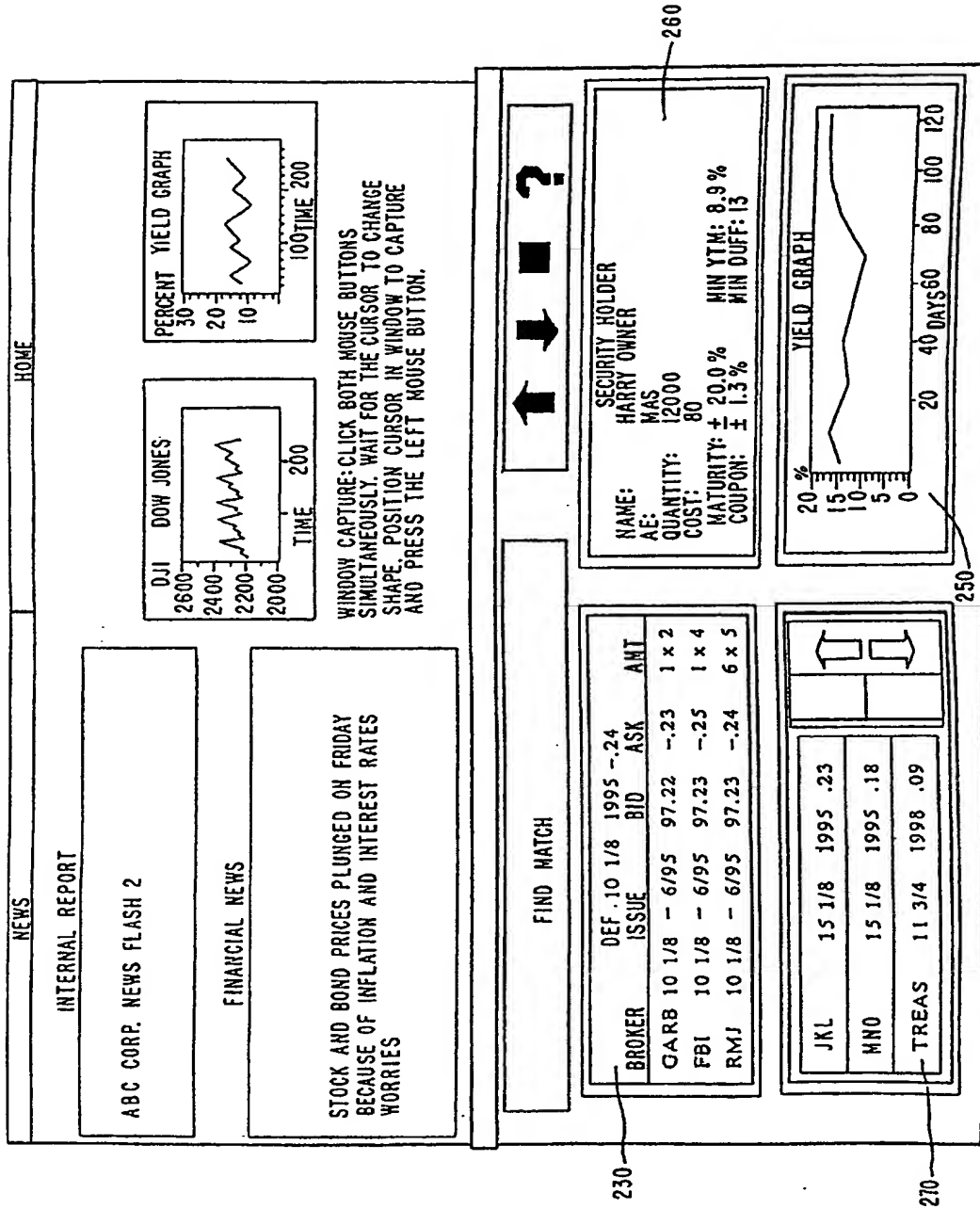filled in by system

Fig. 1
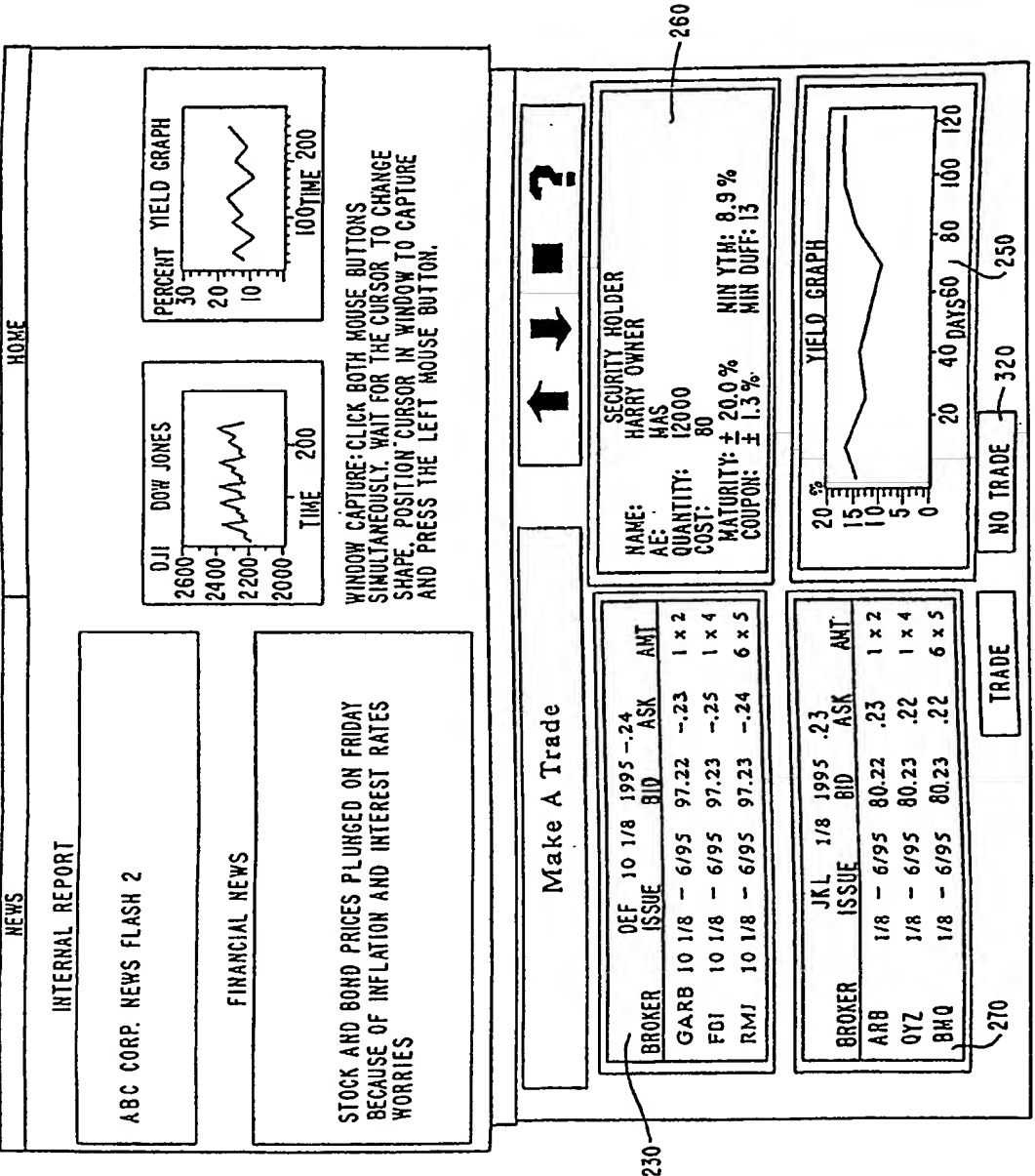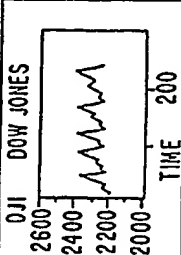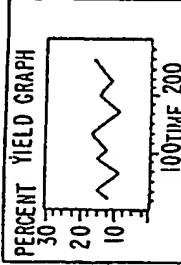
FIG. 2A

FIG. 2B

FIG. 2C

NEWS HOME

INTERNAL REPORT

ABC CORP. NEWS FLASH 2

FINANCIAL NEWS

STOCK AND BOND PRICES PLUNGED ON FRIDAY
BECAUSE OF INFLATION AND INTEREST RATES
WORRIES

DJI DOW JONES
2600
2400
2200
2000
TIME   200

PERCENT YIELD GRAPH
30
20
10
100 TIME 200

WINDOW CAPTURE: CLICK BOTH MOUSE BUTTONS
SIMULTANEOUSLY. WAIT FOR THE CURSOR TO CHANGE
SHAPE. POSITION CURSOR IN WINDOW TO CAPTURE
AND PRESS THE LEFT MOUSE BUTTON.

← ■ ?

SECURITY HOLDER

NAME:	HARRY OWNER
AE:	MAS
QUANTITY:	12000
COST:	80
MATURITY: ± 20.0 %	MIN YTM: 8.9 %
COUPON: ± 1.3 %	MIN DUFF: 13

260

YIELD GRAPH
20 %
15
10
5
0
20   40 DAYS 60   80   100   120

250

FIND MATCH

BROKER	ISSUE		BID	ASK	AMT
DEF. 10 1/8	1995			-.24	
GARB 10 1/8	- 6/95	97.22	-.23	1 × 2
FBI 10 1/8	- 6/95	97.23	-.25	1 × 4
RMJ 10 1/8	- 6/95	97.23	-.24	6 × 5

←→ ←→

JKL	15 1/8	1995	.23
MNO	15 1/8	1995	.18
TREAS	11 3/4	1998	.09

230

270

8

FIG. 2D

NEWS   HOME

INTERNAL REPORT

ABC CORP. NEWS FLASH 2

FINANCIAL NEWS

STOCK AND BOND PRICES PLUNGED ON FRIDAY
BECAUSE OF INFLATION AND INTEREST RATES
WORRIES

DJI   DOW JONES
2600
2400
2200
2000
        TIME   200

PERCENT YIELD GRAPH
30
20
10
        100TIME 200

WINDOW CAPTURE: CLICK BOTH MOUSE BUTTONS
SIMULTANEOUSLY. WAIT FOR THE CURSOR TO CHANGE
SHAPE. POSITION CURSOR IN WINDOW TO CAPTURE
AND PRESS THE LEFT MOUSE BUTTON.

Make A Trade

← → ■ ? '

SECURITY HOLDER
NAME: HARRY OWNER
AE: MAS
QUANTITY: 12000
COST: 80
MATURITY: ± 20.0 %   NIN YTM: 8.9 %
COUPON: ± 1.3 %   MIN DUFF: 13

260

OEF 10 1/8 1995 -.24
BROKER   ISSUE   BID   ASK   AMT
GARB 10 1/8 – 6/95 97.22   -.23   1 x 2
FDI   10 1/8 – 6/95 97.23   -.25   1 x 4
RMJ   10 1/8 – 6/95 97.23   -.24   6 x 5

JKL 1/8 1995 .23
BROKER   ISSUE   BID   ASK   AMT
ARB   1/8 – 6/95 80.22   .23   1 x 2
QYZ   1/8 – 6/95 80.23   .22   1 x 4
BMQ   1/8 – 6/95 80.23   .22   6 x 5

270

YIELD GRAPH
20 %
15
10
5
0
       20   40 DAYS 60   80   100 120

TRADE   NO TRADE

230   320   250

9

FIG. 2E

NEWS

HOME

INTERNAL REPORT

ABC CORP. NEWS FLASH 2

FINANCIAL NEWS

STOCK AND BOND PRICES PLUNGED ON FRIDAY
BECAUSE OF INFLATION AND INTEREST RATES
WORRIES

DOW JONES

DJI
2600
2400
2200
2000
TIME   200

PERCENT   YIELD GRAPH
30
20
10
100TIME 200

WINDOW CAPTURE:CLICK BOTH MOUSE BUTTONS
SIMULTANEOUSLY. WAIT FOR THE CURSOR TO CHANGE
SHAPE. POSITION CURSOR IN WINDOW TO CAPTURE
AND PRESS THE LEFT MOUSE BUTTON.

280

Bought.   ☒ Sold

Issuer   OEF   Mat   1995

Coupon   10 1/8   Price   97.23

Amount   12000

Contra Party   Harry OWNER

Settlement   Std

Special

Next
Ticket — 285

FIG. 2F

FIG. 2G

NEWS   HOME

INTERNAL REPORT

ABC CORP. NEWS FLASH 2

FINANCIAL NEWS

STOCK AND BOND PRICES PLUNGED ON FRIDAY
BECAUSE OF INFLATION AND INTEREST RATES
WORRIES

PERCENT YIELD GRAPH

100 TIME 200

DJI   DOW JONES

TIME 200

WINDOW CAPTURE: CLICK BOTH MOUSE BUTTONS
SIMULTANEOUSLY. WAIT FOR THE CURSOR TO CHANGE
SHAPE. POSITION CURSOR IN WINDOW TO CAPTURE
AND PRESS THE LEFT MOUSE BUTTON.

BACK OFFICE OPERATIONS CONFIRMATION

NAME: HARRY OWNER

ADDRESS: 1734 SOME PLACE
ANYWHERE N.Y. 12345

SSN: 012-34-5678

ACCOUNT NUMBER: 333-7777

ACCOUNT RECORD

ITEM	TYPE	QTY	PRICE	MONEY
	S	12000	97.23	1,207,596,600
	B	12000	80.23	996,456,600

310

Done

300

EUROPEAN SEARCH REPORT

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
P,X	EP-A-0 388 162 (CHICAGO BOARD OF TRADE) * abstract; figure 1b * _ _ _	1,2	G 06 F 15/21
X	GB-A-2 161 003 (MERRILL LYNCH AND CO INC (USA DELAWARE)) * abstract; figure 2 * * page 3, right-hand column, lines 117 - 124 * _ _ _	1,2	
X	US-A-4 823 265 (GEORGE E. NELSON) * column 1, line 58 - column 2, line 25; figure 2 * _ _ _ _ _	1,2	

	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
	G 06 F

The present search report has been drawn up for all claims

Place of search	Date of completion of search	Examiner
Berlin	05 July 91	NICHOLLS J